

CLAIMS

What is claimed is:

1. A modular pole assembly comprising:
 - a plurality of sides;
 - each of said plurality of sides including at least two panel members;
 - each of said at least two panel members of each of said plurality of sides having a first long edge and a second long edge;
 - a plurality of corner pieces in matching quantity to said plurality of sides;
 - said plurality of corner pieces each including a first end and a second end;
 - said first long edge of each of said at least two panel members of each of said sides being retained along said first end of each of said plurality of corner pieces;
 - said second long edge of each of said at least two panel members of each of said sides being retained along said second end of each of said plurality of corner pieces;
 - said plurality of sides and said plurality of corner pieces attached such that a tubular structure is defined.
2. The modular pole assembly of claim 1, further comprising:
 - said first end of each of said plurality of corner pieces including a first inner finger, a first center support and a first outer finger;
 - said first long edge of one of said at least two panel members of each of said sides held within a first inner receiving slot intermediate said first inner finger and said first center support;

said first long edge of a second of said at least two panel members of each of said sides held within a first outer receiving slot intermediate said first outer finger and said first center support;

 said second end of each of said plurality of corner pieces including a second inner finger, a second center support and a second outer finger;

 said second long edge of one of said at least two panel members of each of said sides held within a second inner receiving slot intermediate said second inner finger and said second center support;

 said second long edge of said second of said at least two panel members of each of said sides held within a second outer receiving slot intermediate said second outer finger and said second center support.

3. The modular pole assembly of claim 2, further comprising:

 said at least two panel members of said plurality of sides each including a grooved surface;

 a first groove in said grooved surface parallel to said first long edge of each of said at least two panel members of said plurality of sides;

 a second groove in said grooved surface parallel to said second long edge of each of said at least two panel members of said plurality of sides;

 a first inner track within said first inner receiving slot along said first end of each of said plurality of corner pieces;

 a first outer track within said first outer receiving slot along said first end of each of said plurality of corner piece;

said first inner track nested within said first groove of a first panel member of said at least two panel members of each of said sides;

 said first outer track nested within said first groove of a second panel member of said at least two panel members of each of said sides;

 a second inner track within said second inner receiving slot along said second end of each of said plurality of corner pieces;

 a second outer track within said second outer receiving slot along said second end of each of said plurality of corner pieces;

 said second inner track nested within said second groove of said first panel member of said at least two panel members of each of said sides;

 said second outer track nested within said second groove of said second panel member of said at least two panel members of each of said sides.

4. The modular pole assembly of claim 3, further comprising:

 said first inner track extending from said first inner finger toward said first center support;

 said first outer track extending from said first outer finger toward said first center support;

 said second inner track extending from said second inner finger toward said second center support;

 said second outer track extending from said second outer finger toward said second center support;

said first inner track, said first outer track, said second inner track and said second outer track each having an outwardly curved profile;

 said first groove and said second groove each having an inwardly curved profile;

 said outwardly curved profile fitting within said inwardly curved profile.

5. The modular pole assembly of claim 2, further comprising:

 said plurality of corner pieces each including an outer corner surface and an inner corner surface;

 said plurality of corner pieces each having a corner length;

 said plurality of corner pieces each having at least one channel extending therethrough along said corner length;

 said at least one channel of each of said plurality of corner pieces located between said outer corner surface and said inner corner surface.

6. The pole assembly of claim 5 further comprising:

 at least one wire extending through said at least one channel of at least one of said plurality of corner pieces;

 said wire providing electrical continuity between at least two points on said tubular structure.

7. The modular pole assembly of claim 5, further comprising:

 an insulative foam filling at least one channel of at least one of said plurality of corner pieces.

8. The pole assembly of claim 5, further comprising:

at least one wire extending through said at least one channel of at least one of said plurality of corner pieces;

 said wire providing electrical continuity between at least two points on said tubular structure;

 insulation filling said at least one channel of each of said plurality of corner pieces not having wire extending therethrough .

9. The modular pole assembly of claim 5, further comprising:

 a pole height;

 said corner length being less than said pole height;

 said plurality of corner pieces each having an upper end and a lower end;

 said plurality of corner pieces divided into a plurality of corner piece sets;

 a plurality of corner splicing posts;

 said plurality of corner splicing posts each having an upper post end and a lower post end;

 said at least one channel in said upper end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said lower post end of said plurality of splicing posts in an interference fit such that said upper post end of said plurality of splicing posts is held within said channel and extends from said upper end of said plurality of corner pieces of said at least one of said plurality of corner piece sets;

 said at least one channel in said lower end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said upper post end of said plurality of splicing posts in an interference fit such that said upper post end is held within said

channel and said lower end and said upper end of consecutive, adjacent corner pieces of said plurality of corner piece sets are in abutment;

 said plurality of splicing posts adjoining said plurality of corner piece sets such that said corner length of each of said consecutive adjacent corner pieces sums said pole height.

10. The modular pole assembly of claim 5, further comprising:

 said plurality of sides each having a panel height;

 said panel height being less than said pole height;

 said at least two panel members of said plurality of sides each having a base edge and a top edge;

 said plurality of sides divided into a plurality of panel sets;

 a plurality of panel splicing pieces each including two parallel plates adjoined by a center member such that a first splicing slot and a second splicing slot are formed;

 said first splicing slot of each of said plurality of panel splicing pieces receiving said top edge of each of said at least two panel members of at least one of said plurality of panel sets;

 said second splicing slot of each of said plurality of panel splicing pieces receiving said base edge of each of said at least two panel members of at least one of said plurality of panel sets such that two panel members are held in co-planar alignment;

 said plurality of panel splicing pieces adjoining said plurality of panel sets such that said panel height of each of said panel members held in co-planar alignment sums said pole height.

11. The modular pole assembly of claim 10, further comprising:

said corner length being less than said pole height;
 said plurality of corner pieces each having an upper end and a lower end;
 said plurality of corner pieces divided into a plurality of corner piece sets;
 a plurality of corner splicing posts;

 said plurality of corner splicing posts each having an upper post end and a lower post
end;

 said at least one channel in said upper end of said plurality of corner pieces of at least
one of said plurality of corner piece sets each receiving said lower post end of said plurality
of splicing posts in an interference fit such that said upper post end of said plurality of
splicing posts is held within said channel and extends from said upper end of said plurality of
corner pieces of said at least one of said plurality of corner piece sets;

 said at least one channel in said lower end of said plurality of corner pieces of at least
one of said plurality of corner piece sets each receiving said upper post end of said plurality
of splicing posts in an interference fit such that said upper post end is held within said
channel and said lower end and said upper end of consecutive, adjacent corner pieces of said
plurality of corner piece sets are in abutment;

 said plurality of splicing posts adjoining said plurality of corner piece sets such that
said corner length of each of said consecutive, adjacent corner pieces sums said pole height.

12. The modular pole assembly of claim 2, further comprising:

 insulation intermediate each of said at least two panel members of each of said sides.

13. The modular pole assembly of claim 1, further comprising:

said first end of each of said plurality of corner pieces including a plurality of first end fingers;

 said first long edge of said at least two panel members held each within one of a plurality receiving slots defined between each of said plurality of first end fingers;

 said second end of each of said plurality of corner pieces including a plurality of second end fingers;

 said second long edge of said at least two panel members held within one of a plurality of receiving slots defined between each of said plurality of second end fingers.

14. A modular pole assembly comprising:

 a plurality of sides;

 each of said plurality of sides including at least two panel members;

 each of said at least two panel members of each of said plurality of sides having a first long edge and a second long edge;

 a plurality of corner pieces in matching quantity to said plurality of sides;

 said plurality of corner pieces each including a first end and a second end;

 said first long edge of each of said at least two panel members of each of said sides being retained along said first end of each of said plurality of corner pieces;

 said second long edge of each of said at least two panel members of each of said sides being retained along said second end of each of said plurality of corner pieces;

 said plurality of sides and said plurality of corner pieces attached such that a tubular structure is defined;

said first end of each of said plurality of corner pieces including a first inner finger, a first center support and a first outer finger;

 said first long edge of one of said at least two panel members of each of said sides held within a first inner receiving slot intermediate said first inner finger and said first center support;

 said first long edge of a second of said at least two panel members of each of said sides held within a first outer receiving slot intermediate said first outer finger and said first center support;

 said second end of each of said plurality of corner pieces including a second inner finger, a second center support and a second outer finger;

 said second long edge of one of said at least two panel members of each of said sides held within a second inner receiving slot intermediate said second inner finger and said second center support;

 said second long edge of said second of said at least two panel members of each of said sides held within a second outer receiving slot intermediate said second outer finger and said second center support;

 said at least two panel members of said plurality of sides each including a grooved surface;

 a first groove in said grooved surface parallel to said first long edge of each of said at least two panel members of said plurality of sides;

 a second groove in said grooved surface parallel to said second long edge of each of said at least two panel members of said plurality of sides;

a first inner track within said first inner receiving slot along said first end of each of said plurality of corner pieces;

a first outer track within said first outer receiving slot along said first end of each of said plurality of corner piece;

said first inner track nested within said first groove of a first panel member of said at least two panel members of each of said sides;

said first outer track nested within said first groove of a second panel member of said at least two panel members of each of said sides;

a second inner track within said second inner receiving slot along said second end of each of said plurality of corner pieces;

a second outer track within said second outer receiving slot along said second end of each of said plurality of corner pieces;

said second inner track nested within said second groove of said first panel member of said at least two panel members of each of said sides;

said second outer track nested within said second groove of said second panel member of said at least two panel members of each of said sides;

said plurality of corner pieces each including an outer corner surface and an inner corner surface;

said plurality of corner pieces each having a corner length;

said plurality of corner pieces each having at least one channel extending therethrough along said corner length;

said at least one channel of each of said plurality of corner pieces located between said outer corner surface and said inner corner surface.

15. The modular pole assembly of claim 14, further comprising:

 said first inner track extending from said first inner finger toward said first center support;

 said first outer track extending from said first outer finger toward said first center support;

 said second inner track extending from said second inner finger toward said second center support;

 said second outer track extending from said second outer finger toward said second center support;

 said first inner track, said first outer track, said second inner track and said second outer track each having an outwardly curved profile;

 said first groove and said second groove each having an inwardly curved profile;

 said outwardly curved profile fitting within said inwardly curved profile.

16. The modular pole assembly of claim 14, further comprising:

 at least one wire extending through said at least one channel of at least one of said plurality of corner pieces;

 said wire providing electrical continuity between at least two points on said tubular structure;

 insulation filling said at least one channel of each of said plurality of corner pieces not having wire extending therethrough .

17. The modular pole assembly of claim 14, further comprising:
 - insulation intermediate each of said at least two panel members of each of said sides.
18. The modular pole assembly of claim 17, further comprising:
 - at least one wire extending through said at least one channel of at least one of said plurality of corner pieces;
 - said wire providing electrical continuity between at least two points on said tubular structure;
 - insulation filling said at least one channel of each of said plurality of corner pieces not having wire extending therethrough .
19. The modular pole assembly of claim 18, further comprising:
 - said corner length being less than said pole height;
 - said plurality of corner pieces each having an upper end and a lower end;
 - said plurality of corner pieces divided into a plurality of corner piece sets;
 - a plurality of corner splicing posts;
 - said plurality of corner splicing posts each having an upper post end and a lower post end;
 - said at least one channel in said upper end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said lower post end of said plurality of splicing posts in an interference fit such that said upper post end of said plurality of splicing posts is held within said channel and extends from said upper end of said plurality of corner pieces of said at least one of said plurality of corner piece sets;

said at least one channel in said lower end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said upper post end of said plurality of splicing posts in an interference fit such that said upper post end is held within said channel and said lower end and said upper end of consecutive, adjacent corner pieces of said plurality of corner piece sets are in abutment;

said plurality of splicing posts adjoining said plurality of corner piece sets such that said corner length of each of said consecutive, adjacent corner pieces sums said pole height.

20. The modular pole assembly of claim 14, further comprising:

a pole height;

said corner length being less than said pole height;

said plurality of corner pieces each having an upper end and a lower end;

said plurality of corner pieces divided into a plurality of corner piece sets;

a plurality of corner splicing posts;

said plurality of corner splicing posts each having an upper post end and a lower post end;

said at least one channel in said upper end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said lower post end of said plurality of splicing posts in an interference fit such that said upper post end of said plurality of splicing posts is held within said channel and extends from said upper end of said plurality of corner pieces of said at least one of said plurality of corner piece sets;

said at least one channel in said lower end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said upper post end of said plurality

of splicing posts in an interference fit such that said upper post end is held within said channel and said lower end and said upper end of consecutive adjacent corner pieces of said plurality of corner piece sets are in abutment;

 said plurality of splicing posts adjoining said plurality of corner piece sets such that said corner length of each of said consecutive, adjacent corner pieces sums said pole height.

21. The modular pole assembly of claim 14, further comprising:

 said plurality of sides each having a panel height;
 said panel height being less than said pole height;
 said at least two panel members of said plurality of sides each having a base edge and a top edge;
 said plurality of sides divided into a plurality of panel sets;
 a plurality of panel splicing pieces each including two parallel plates adjoined by a center member such that a first splicing slot and a second splicing slot are formed;
 said first splicing slot of each of said plurality of panel splicing pieces receiving said top edge of each of said at least two panel members of at least one of said plurality of panel sets;
 said second splicing slot of each of said plurality of panel splicing pieces receiving said base edge of each of said at least two panel members of at least one of said plurality of panel sets such that two panel members are held in co-planar alignment;
 said plurality of panel splicing pieces adjoining said plurality of panel sets such that said panel height of each of said panel members held in co-planar alignment sums said pole height.

22. The modular pole assembly of claim 14, further comprising:

 said corner length being less than said pole height;

 said plurality of corner pieces each having an upper end and a lower end;

 said plurality of corner pieces divided into a plurality of corner piece sets;

 a plurality of corner splicing posts;

 said plurality of corner splicing posts each having an upper post end and a lower post

end;

 said at least one channel in said upper end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said lower post end of said plurality of splicing posts in an interference fit such that said upper post end of said plurality of splicing posts is held within said channel and extends from said upper end of said plurality of corner pieces of said at least one of said plurality of corner piece sets;

 said at least one channel in said lower end of said plurality of corner pieces of at least one of said plurality of corner piece sets each receiving said upper post end of said plurality of splicing posts in an interference fit such that said upper post end is held within said channel and said lower end and said upper end of consecutive, adjacent corner pieces of said plurality of corner piece sets are in abutment;

 said plurality of splicing posts adjoining said plurality of corner piece sets such that said corner length of each of said consecutive, adjacent corner pieces sums said pole height.